

**DECISION RECORD**  
**FINDING OF NO SIGNIFICANT IMPACT**  
***Environmental Assessment***  
***Spencer Hot Springs Area Geothermal Leases***  
***Lander County, Nevada***

***EA# NV63-EA04-59***  
NVN-077778, NVN-077779, NVN-077780

**Introduction**

In 2003 the Bureau of Land Management (BLM) received applications for three geothermal leases located on public lands managed by the BLM's Battle Mountain Field Office (BLM-BMFO) in the area surrounding Spencer Hot Springs, in the southeast corner of Lander County in central Nevada. These three geothermal lease applications are located approximately 15 miles southeast of the community of Austin and approximately 15 miles northeast of the community of Kingston and encompass an area of about 4,841 acres.

**SUMMARY OF PROPOSED ACTION:**

The Proposed Action is BLM's approval of three noncompetitive geothermal lease applications covering a total of approximately 4,841 acres of public land administered by the BLM which were submitted by Western Geothermal Partners, LLC of Reno, Nevada. The specific location of each of these lease applications is listed below. Surface disturbance is not a part of the Proposed Action. Geothermal leases convey to the lessee the "exclusive right and privilege to drill for, extract, produce, remove, utilize, sell, and dispose of geothermal steam and associated geothermal resources." However, federal geothermal leases do not grant the exclusive right to occupy the leased public land – existing authorized uses can continue and new uses compatible with the intent of the geothermal leases can still be authorized. Geothermal leases include the right of ingress to and egress from the leased lands; the right to construct and operate on the lease; and the right to occupy as much of the land as may be necessary; all of which are subject to lease stipulations and compliance with applicable laws and regulations, including compliance with all regulations and orders adopted under the Geothermal Steam Act. Regulations adopted to implement the Geothermal Steam Act expressly require separate approvals from the BLM, each subject to NEPA, for each proposed geothermal lease operation beyond "casual use" activities. Therefore, each exploration proposal, above casual use, and all development and production proposals will be analyzed as required by NEPA. The level of public participation will be commensurate with the type of NEPA document and the level of activity proposed.

Serial Number	Legal Description within Mount Diablo Baseline and Meridian
NVN-077778	Sections 1, 2, 11 and 12, Township 17 North, Range 45½ East
NVN-077779	Sections 11, 12 and 13, Township 17 North, Range 45 East
NVN-077780	Sections 14 and 24, Township 17 North, Range 45 East

**Decision**

The lands listed above are within the Shoshone-Eureka Planning Area and are open to geothermal leasing under the Shoshone-Eureka Resource Management Plan. Geothermal leasing is consistent with the Shoshone-Eureka Resource Management Plan. As a result of the analysis presented in the EA, it is my decision that the lands shall be leased subject to the attached stipulations and standard operating

procedures. It is also my decision that 200 acres of geothermal lease application NVN-077778 in the immediate vicinity of Spencer Hot Springs, as depicted in the attached figure and listed below, will be subject to no surface occupancy by the geothermal lessee. The analysis of the Proposed Action, coupled with stipulations and standard operating procedures, has led to the decision that all practicable means to avoid or minimize environmental harm have been adopted and that unnecessary or undue degradation of the public lands will not result.

These geothermal leases are granted for a primary term of ten years, which under current law may be extended for up to two additional five-year periods. If the lessee produces or uses geothermal resources in commercial quantities during the primary term, the lease will continue in "additional term" for as long as geothermal resources are produced or used in commercial quantities for up to forty years beyond the end of the primary term

Several comments were received requesting that BLM not lease or stipulate no surface occupancy on 160 acres around Spencer Hot Springs. During internal review BLM-BMFO considered leasing only portions of the requested lease area. However, as discussed in Section 2.2 of the EA, BLM-BMFO determined that there was no site-specific information which would have supported excluding some of the requested lands from the leasing decision in order to respond to any of the identified issues or concerns. BLM considered the comments requesting no surface occupancy and reviewed the analysis in the EA to determine if this request should be adopted. Upon careful consideration, it was determined that there was sufficient reason to stipulate no surface occupancy in the immediate vicinity of the springs. The analysis in the environmental assessment supports this decision in that several mitigating measures imply no surface occupancy in the immediate area around the springs, but do not clearly define the specific area of no surface occupancy.

The No Action Alternative was not selected because the Proposed Action with the attached stipulations would not cause harm or degradation to any resource. The No Action Alternative may have an adverse energy impact.

### **Stipulations and Standard Operating Procedures**

The following stipulations are applicable to these geothermal leases:

#### **1. Air Quality**

The operator will be required to implement at the direction of the Authorized Officer testing of emissions for H<sub>2</sub>S and other noxious / deadly gases where there is indication that these gases may occur.

#### **2. Cultural-Historical Resources**

Cultural resource mitigation will be developed on a case-by-case basis as required by federal law and regulation. Stipulations will be developed during site-specific NEPA analysis.

Prior to the approval of each geothermal lease operation with the potential for surface disturbance, a cultural resource survey will be required to have been performed by a qualified archaeologist acceptable to the BLM-BMFO. Any prehistoric or historic cultural resources identified during each survey must be either avoided or appropriate mitigation measures developed and implemented to protect the resources.

#### **3. Native American Issues**

Considering the characteristics or description of the action (geothermal lease) it has been determined that Native American consultation is unnecessary at this time. Upon the receipt of an application for exploration or development, Native American consultation would be initiated with the appropriate Tribal governments and other Native American groups. As surface disturbing activities occur, the BLM would require that the operator monitor the water temperature and outflow of water from local hot springs and existing wells as directed by the Authorized Officer. If the temperature and outflow of the water from the spring or well were impacted to a degree determined by the Authorized Officer to be more than negligible,

the BLM would require the operator to take corrective actions. Failure of the operator to take the corrective measures as directed could result in BLM terminating the operation.

#### **4. Special Status Species**

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. The special status species list is reviewed and / or updated annually and as species are added, new mitigations / stipulations may add further restrictions. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM would not approve any ground-disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. § 1531 et seq., including completion of any required procedure for conference or consultation.

Exploratory endeavors on these leases would require a Special Status Species review, and may require a field survey for the presence of Special Status Species. Potential impacts to Special Status Species would be analyzed on a case-by-case basis. Mitigation measures would be developed on an individual project basis depending upon the results of the survey.

Springs within ½ mile of exploration activities would be inventoried by BLM approved and supervised personnel for the presence of invertebrates. If a rare genus, such as *Pyrgulopsis*, is found, identification to species and monitoring of effects of the proposed action would be required and site-specific mitigation may be developed by the BLM.

BLM could require measures listed below for activities in sage grouse and ferruginous hawk habitat.

Sage grouse: Operations would avoid active leks (strutting grounds) by 2 miles during strutting season. Approximate dates: March 1 - May 15. Operations would avoid nesting and brood rearing habitat (especially riparian habitat where broods concentrate beginning usually in June) by ½ mile during the time such areas are in use. Approximate dates: April 1 - August 15. Operations would avoid sage grouse wintering habitat by ½ mile while occupied. Most known wintering grounds in the Shoshone-Eureka Resource Area occur at high elevations and are not likely to be affected. Avoidance dates would vary with severity of the winter. BLM would limit the disturbance to and fragmentation of all known sage grouse habitat.

Ferruginous hawks: Operations would avoid active nests by ½ mile. Approximate dates: March 15 - July 1.

Prior to the approval of any geothermal operations with the potential for surface disturbance, a site-specific biological survey for special status species will be required to be undertaken by a qualified biologist acceptable to the BLM-BMFO. Any special status species identified during the survey must be either avoided or appropriate mitigation measures developed to protect the special status species.

#### **5. Hydrology and Water Quality and Quantity**

All applicants for exploration permits would be required to submit a surface water inventory to the Authorized Officer before authorization would be granted. The inventory would include a map of appropriate scale (such as 1:24,000) indicating the location of all surface water on public land within ½ mile radius from the surface-disturbing activity.

The NOTICE OF INTENT TO CONDUCT GEOTHERMAL RESOURCE EXPLORATION OPERATIONS (Form 3200-9), terms and conditions, number 10 states that "Vegetation shall not be

disturbed within 300 feet of waters designated by the Authorized Officer, except at approved stream crossing.”

At the commencement of surface disturbing activities for the drilling of exploration wells, the BLM would require that the drilling company monitor the water temperature and / or outflow of water from local springs and existing wells as directed by the Authorized Officer. If the temperature and outflow of the water from the spring or well were impacted to a degree determined by the Authorized Officer to be more than negligible, the BLM would require the operator to take corrective actions. Failure of the operator to take the corrective measures as directed could result in BLM's terminating the operation.

Results would be reported to Federal and State agencies on the status of these hydrologic systems during drilling.

Impacts include, but are not limited to, the following:

- Change in water temperature
- Change in discharge rate
- Substantial decrease in water table level
- Surface subsidence

In the event of impacts to surface or subsurface waters, determined by the Authorized Officer to be more than negligible, or if a violation of Federal or State water quality standards occurs, the Authorized Officer would assess the situation, and may require the operator to amend, relocate or discontinue operations. If operations were terminated, the BLM would develop and the operator would implement remediation measures.

Typical measures include:

- No use of the surface water;
- Limitations on the type of equipment that may be used, including no surface occupancy within ¼ mile of the springs; and
- Restrictions of activities during certain times of the year.

## **6. Invasive Nonnative Species**

Areas to be involved in surface disturbing activities would be inventoried for the presence of invasive, nonnative species and treated if present.

The exterior of all vehicles and heavy equipment would be cleaned by water before entering public lands to do work. To minimize the possibility for contamination, a designated wash area would be designated by the BLM and would be established and monitored by the operator in high use areas.

The boots of operators and other persons working in the areas would be cleaned of seed before coming onto BLM lands.

The BLM would develop and the operator would implement a weed treatment program from the time operation commences until the site is abandoned.

Seed and mulch used to reclaim disturbed areas would be free of invasive nonnative species.

Operator and workers would avoid driving through or parking in areas where invasive nonnative species occur.

When sites are abandoned, they would be inventoried for the presence of invasive nonnative species and treated if present.

## **7. Land Use Authorizations**

Proposals for exploration and development would be modified or denied if such proposals would interfere with the existing use authorizations. The public water reserve is closed to leasing.

## **8. Minerals**

Compatible uses of the surface are anticipated. If incompatible uses are proposed, the one with the prior existing right would be granted.

## **9. Allotment Management**

The lease area is within a grazing allotment, the Assistant Field Manager may require additional measures, including seasonal restrictions or no surface occupancy.

If operations cause a water source to become unavailable to livestock, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water and may require the lessee to provide water by hauling or other means until such time as the well or water development is completed.

Fences and surface pipeline needed for geothermal operations must be constructed in a manner that will not prevent livestock access to undisturbed portions of the lease for grazing.

## **10. Recreation**

If access to the area were restricted as a result of these leases, the ability of the public to continue using the area could be reduced. Any efforts to limit access or physically alter the area should take current and potential recreational use into consideration.

Normal operational noise levels generated by geothermal utilization facilities should not exceed a 24-hour time-weighted average of 45 dBA when measured from a representative location at Spencer Hot Springs.

To preserve the recreational value of the area, no surface occupancy will be stipulated on the following lands:

T. 17 N., R. 45½ E., MDM, Nevada

sec. 11, SESENE,	10.00 acres
E2SE.	80.00 acres
sec. 12, SWSWNW,	10.00 acres
SWNESW,	10.00 acres
NWNWSW,	10.00 acres
S2NWSW,	20.00 acres
SWSW,	40.00 acres
W2SESW.	20.00 acres

Total Acres                      200.00

## **11. Soils**

None identified.

## **12. Vegetation**

Disturbed areas would be reseeded with native or introduced plant species, depending on the site conditions. Disturbed areas would be reseeded with pure live seed (certified weed free) with the mixes in the EA. Native vegetation would be used wherever possible. However, to compete with invasive nonnative species, introduced species, as suggested in the BLM seed list would be used.

## **13. Visual Resources**

None identified.



#### **14. Migratory Birds**

The BLM would limit the amount of ground clearing or other disturbance (such as the creation of cross-country access to drill sites) that an operator may do during the migratory bird nesting season. Areas to be disturbed would be surveyed, by personnel approved and supervised by the BLM to determine the existence and location of any nests. If any nests were located, the nest would be avoided by ¼ mile. If the nest area cannot be avoided, mitigation would be developed on a case-by-case basis.

#### **15. Wildlife**

If operations cause a water source to become unavailable to wildlife, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water and may require the lessee to provide water by hauling or other means until such time as the well or water development is completed.

Fences and surface pipelines needed for geothermal operations shall be designed, located and constructed in a manner that will not prevent pronghorn antelope and other wildlife access to foraging habitat in undisturbed portions of the lease.

#### **16. Wild Horses and Burros**

The lease area is within a HMA, the Authorized Officer may require additional measures for the protection of wild horses and burros, such as seasonal restrictions.

If operations cause a water source to become unavailable to wild horses and burros, the Authorized Officer may require a new well to be drilled, or another water development to be constructed in the general area to provide adequate water and may require the lessee to provide water by hauling or other means until such time as the well or water development is completed.

Fences and surface pipelines needed for geothermal operations shall be designed, located and constructed in a manner that will not prevent wild horses and burros access to undisturbed portions of the lease for foraging.

#### **17. All Resources**

Operators would adhere to all Standard Operating Procedures as outlined in the EA, unless specifically waived by the Authorized Officer.

#### **18. Playas**

Because playas are important recreational places, apt to have cultural sites nearby and provide critical habitat for some migratory waterbirds and shorebirds, including Special Status Species such as the Snowy Plover, mitigation measures would be developed if an exploration or development proposal would impact the playa. Mitigation may include no surface occupancy and seasonal restrictions. No surface occupancy would be allowed on or within ¼ mile of the playa, unless waived by the Authorized Officer. No drilling would be allowed on the playa, unless waived by the Authorized Officer. All surface disturbance would be recontoured to match the natural surface.

The following is a list of Standard Operating Procedures that have been developed via forms, laws, regulations, and BLM policy that the lessee must also adhere to:

1. The BLM requires roads, drill pads, and other disturbed surfaces to be watered for dust suppression as directed by the Assistant Field Manager.
2. The operator must obtain permits as required by Federal, State, and Local laws and regulations. The BLM will not permit any operation that would violate Federal, State, or County water quality regulations. All operations would be required to comply with all State and Federal regulations concerning wetlands and riparian areas.
3. Areas disturbed are to be scarified and revegetated as soon as feasible.

4. All traffic associated with exploration is required to follow routes that avoid cultural resources. Operators identify and flag anticipated routes and detours on the route.
5. A cultural inventory may be required. The decision to require a cultural inventory is made by the Assistant Field Manager for Nonrenewable Resources. The inventory would be one of the following types:
  - a. Class I: A review of existing historic documentation and BLM office records. This type of inventory is generally used when the proposed project is located in an area of complete disturbance, or where the area has been previously inventoried using methods consistent with existing standards
  - b. Class II: A review of existing historic documentation and BLM office records, and some fieldwork. This type of inventory is generally used when only a portion of the project area has been disturbed, or portions of the project area have been previously inventoried using methods consistent with existing standards. It may also include a determination of significance for cultural properties located within the project area, and a determination of effect.
  - c. Class III: A complete inventory that includes a review of existing historic documentation and BLM office records, and a complete inventory of the project area. It includes an evaluation of significance for cultural properties located within the project area and a determination of effect. This type of inventory is used in areas where there have been no previous inventories, in areas where there has been a change in ground visibility, or in areas that were inventoried using methods not acceptable by existing standards.
6. Cattle guards, fences, and other range improvement facilities would be constructed as required by the Authorized Officer to mitigate impacts to livestock grazing and wild horses and burros.
7. All topsoils, except playas, are salvaged, stockpiled, labeled, and used for reclamation activities, including revegetation. Surface disturbance is planned and constructed so as to avoid the most easily eroded soils.
8. A visual contrast rating worksheet is prepared by the BLM for each drill site and proposed road construction. Ridges and skylines are avoided.

### **Finding of No Significant Impact**

Based on the analysis of potential environmental impacts in the EA which analyzed direct, indirect and cumulative impacts, I have determined that impacts from the Proposed Action, when coupled with stipulations and standard operating procedures presented in detail in the EA and Decision Record, would not be significant. Therefore, an Environmental Impact Statement will not be prepared.

### **Rationale**

The Proposed Action as analyzed in the Environmental Assessment EA NV063-EA04-59 with the standard operating procedures and stipulations outlined in the Decision Record will prevent unnecessary or undue degradation of public land should future exploration, production, or development proposals be submitted. Although the implementation of the proposed action, issuance of three geothermal leases, conveys to the lessee the right and privilege to drill for, extract, produce, remove, utilize, sell, and dispose of geothermal steam and associated geothermal resources, it does not authorize the lessee to actually conduct any activities on the land beyond casual use. Thus, there is no potential for direct environmental impacts. However, indirect impacts may occur to certain resources. Resource review and analyses have been coordinated with other federal and state agencies. Resources determined to be potentially impacted were analyzed in the EA specific to the Proposed Action.

Recreation and hydrology, both surface and subsurface, were the major issues associated with the proposed action. While there is *ad hoc* recreation at and around Spencer Hot Springs, BLM does not recognize Spencer Hot Springs as a developed recreation facility. However, the recreational values of the area have been preserved by requiring monitoring for hydrogen sulfide, limiting the noise levels generated when measured at a representative location near the springs, and requiring no surface occupancy by the lessee on the 200 acres immediately surrounding the springs. Preservation of the springs and wells in the area were also determined by BLM to be paramount. While the EA presented a brief discussion on the hydrology of the Spencer Hot Springs area, BLM did not perform any studies to characterize the groundwater flow or sources in the area. While BLM at this point has an incomplete understanding of the hydrology of the area, the BLM has retained enough authority to require the operator to begin a monitoring program, approved by the BLM, when exploration occurs. This monitoring program would be used to gather data that would help increase the understanding of the hydrologic conditions in the area. A more complete understanding of the hydrologic conditions would be required prior to approval of production or development. Since protection of the springs and wells was determined to be paramount, and BLM does not have an adequate understanding of the hydrology of the area to determine where production and reinjection would have to occur within the lease area to not impact the springs and wells, the BLM has retained the authority through the stipulation to take any and all measures necessary, including denying any and all applications that would impact the springs and wells, and requiring a monitoring program to detect any changes in the springs and wells.

Based on the definition of significance in 40 CFR 1508.27, impacts to these resources are not significant based on the analysis in the EA.

#### **43 CFR, Part 4 Appeal Statement**

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) (request) for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.



Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied,
- (2) The likelihood of the appellant's success on the merits,
- (3) The likelihood of immediate and irreparable harm if the stay is not granted, and
- (4) Whether the public interest favors granting the stay.

If you decide to appeal this decision, please provide this office with a copy of your Statement of Reasons.



Gail G. Givens  
Assistant Field Manager, Nonrenewable Resources  
Battle Mountain Field Office

January 31, 2005

Date

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,  
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL . . . . . Within 30 days file a *Notice of Appeal* in the office which issued this decision (see 43 CFR Secs. 4.411 and 4.413). You may state your reasons for appealing, if you desire.
2. WHERE TO FILE  
NOTICE OF APPEAL . . . . . U.S. Department of the Interior  
Bureau of Land Management  
Battle Mountain Field Office  
50 Bastian Road  
Battle Mountain, NV 89820  
  
SOLICITOR  
ALSO COPY TO . . . . . U.S. Department of the Interior  
Office of the Field Solicitor  
6201 Federal Building  
125 S. State Street  
Salt Lake City, UT 84138-1180
3. STATEMENT OF REASON . . . . . Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, Virginia 22203 (see 43 CFR 4.412 and 4.413). If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary.  
  
SOLICITOR  
ALSO COPY TO . . . . . U.S. Department of the Interior  
Office of the Field Solicitor  
6201 Federal Building  
125 S. State Street  
Salt Lake City, UT 84138-1180
4. ADVERSE PARTIES . . . . . Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the *Notice of Appeal*, (b) the Statement of Reasons, and (c) any other documents files (see 43 CFR Sec. 4.413). Service will be made upon the Associate Solicitor, Division of Energy and Resources, Washington, D.C. 20240, instead of the Field or Regional Solicitor when appeals are taken from decisions of the Director (WO-100).
5. PROOF OF SERVICE . . . . . Within 15 days after any document is served on an adverse party, file proof of that service with the Interior Board of Land Appeals, Office of Hearings and Appeals, U.S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (see 43 CFR Sec. 4.401 (c) (2)).

Unless these procedures are followed your appeal will be subject to dismissal (see 43 CFR Sec. 4.402). Be certain that all communications are identified by serial number of the case being appealed.

NOTE. A document is not filed until it is actually received in the proper office (see 43 CFR Sec. 4.401 (a)).

## SUBPART 1821.2--OFFICE HOURS; TIME AND PLACE FOR FILING

Sec. 1821.2-1 *Office hours of State Offices.* (a) State Offices and the Washington Office of the Bureau of Land Management are open to the public for the filing of documents and inspection of records during the hours specified in this paragraph on Monday through Friday of each week, with the exception of those days where the office may be closed because of a national holiday or Presidential or other administrative order. The hours during which the State Office and the Washington Office are open to the public for the filing of documents and inspection of records are from 10 a.m. to 4 p.m., standard time or daylight savings time, whichever is in effect at the city in which each office is located.

Sec. 1821.2(d) Any documents required or permitted to be filed under the regulations of this chapter, which is received in the State Office or the Washington Office, either in the mail or by personal delivery when the office is not open to the public shall be deemed to be filed as of the day and hour the office next opens to the public.

(e) Any document required by law, regulations, or decision to be filed within a stated period, the last day of which falls on a day the State Office or the Washington Office is officially closed, shall be deemed to be timely filed if it is received in the appropriate office on the next day the office is open to the public.

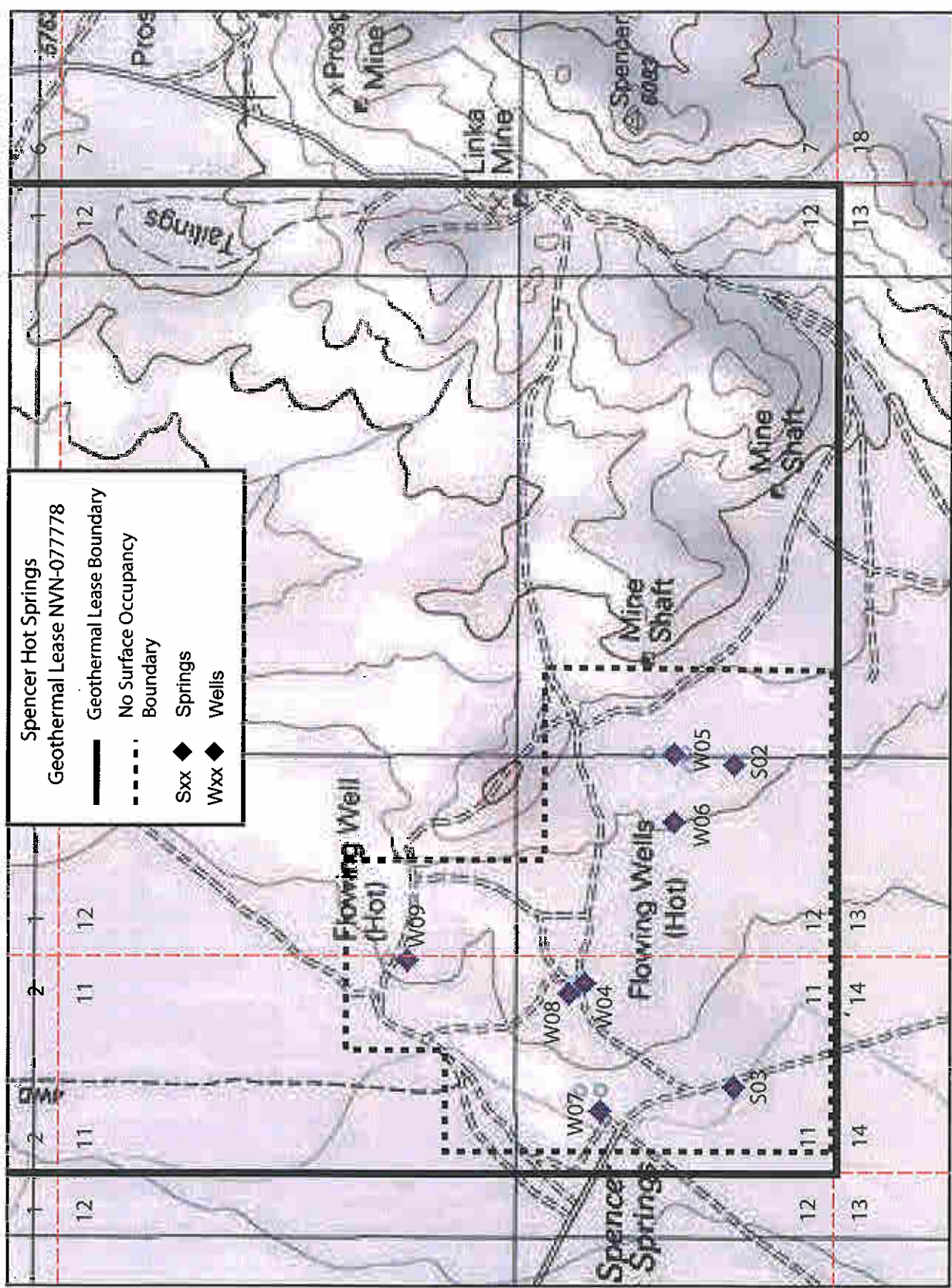
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T. 17 N.

T. 17 N.



R. 45 E.

R. 46 E.

